

CHM 100: How to write the chemical formula of a binary molecular compound.

IDENTIFY THE PREFIXES

The names of binary molecular compounds contain *prefixes* that indicate the number of atoms of each element in a molecule of the compound.

The name of a binary molecular compound will contain *at least one* prefix.

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THE FIRST ELEMENT (MORE METALLIC)

Use the prefix in front of the name of the first element to determine how many atoms of this element are in the compound.

If *no* prefix is given, assume the compound contains one atom of the element.

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THE SECOND ELEMENT (LESS METALLIC)

Use the prefix in front of the *stem* name of the second element to determine how many atoms of this element are in the compound.

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WRITE THE FORMULA

Use subscripts to indicate how many atoms of each element are in the compound. Write the elements in the same order they appeared in the name of the compound.

Examples:

- carbon *monoxide* = CO; carbon *dioxide* = CO₂
- *dinitrogen pentoxide* = N₂O₅; sulfur *hexafluoride* = SF₆
- *dichlorine heptoxide* = Cl₂O₇

GREEK PREFIXES

<i>Prefix</i>	<i>Number</i>
mono-	1
di-	2
tri-	3
tetra-	4
penta-	5
hexa-	6
hepta-	7
octa-	8